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Appl. No. 10/577,279
Amdt. dated January 10, 2011
Reply to Office Action of October 8, 2010

The following is a complete listing of all claims in the application:

Listing of Claims:

1. *(Currently amended)* A cathode material for a secondary battery containing a cathode active material represented by a general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) as a primary component, one or more metal elements selected from the group consisting of metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table, the total content of which metal element is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and a halogen element in an amount of 0.1 mol% or more based on P.
2. *(Original)* The cathode material for a secondary battery according to claim 1, wherein the metal elements are one or more metal elements selected from the group consisting of vanadium (V), chromium (Cr), copper (Cu), zinc (Zn), indium (In), tin (Sn), molybdenum (Mo), and titanium (Ti).
3. *(Canceled)*
4. *(Currently amended)* A cathode material for a secondary battery, synthesized so as to contain a cathode active material represented by a general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) as a primary component, ~~and~~ one or more metal elements selected from the group consisting of metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table, and a halogen element, by mixing a halide or halides of the metal element or elements ~~and with~~ the ingredients of the cathode active material represented by the general formula Li_nFePO_4 (~~wherein n represents a number from 0 to 1~~) and then calcining the

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mixture, wherein the total content of the metal element or elements is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and the halogen element is contained in an amount of 0.1 mol% or more based on P.

5. **(Currently amended)** The cathode material for a secondary battery according to any one of claims 1, 2 or to 4, further comprising conductive carbon deposited on the surface thereof.

6. **(Currently amended)** A method for producing a cathode material for a secondary battery, ~~comprising the steps of: mixing ingredients of a cathode active material synthesized so as to contain a cathode active material represented by a general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) as a primary component, and a halide or halides of one or more metal elements selected from the group consisting of metal elements belonging to Groups 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table, and a halogen element, the method comprising:~~

mixing the ingredients of the cathode active material Li_nFePO_4 with a halide of at least one of the metal elements to obtain a calcination precursor, and then calcining the calcination precursor to composite the cathode active material with the metal element or elements, wherein the total content of the metal element or elements is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and the halogen element is contained in an amount of 0.1 mol% or more based on P.

7. **(Currently amended)** The method for producing a cathode material for a secondary battery according to claim 6, wherein the calcination step has a first stage in a temperature range of that is risen from room temperature to a temperature between 300-°C and

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450°C, and a second stage in a temperature range of room temperature to the calcination completion temperature, and wherein the second stage of the calcination step is carried out after addition of a substance from which conductive carbon is formed by pyrolysis to the product of the first stage of the calcination step.

8. *(Canceled)*

9. *(Currently amended)* The method for producing a cathode material for a secondary battery according to claim 7-~~or 8~~, wherein the substance from which conductive carbon is formed by pyrolysis is a bitumen or a saccharide.

10. *(Currently amended)* A secondary battery containing the cathode material according to any one of claims 1, 2, or 4 to 5 as a constituent element.

11. *(Canceled)*

12. *(New)* The cathode material for a secondary battery according to claim 1, wherein the halogen element is in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.

13. *(New)* The cathode material for a secondary battery according to claim 2, wherein the halogen element is in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.

14. *(New)* A secondary battery containing the cathode material according to claim 5 as a constituent element.